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July 2015
Volume 3, Issue 7

II MEF Safety Spotlight

July Highlights

Safety Resources

Notes from the II MEF Safety Director

Welcome to this month's edition of the II MEF Safety Spotlight! Summer is here, the last school bell has rung and we are all ready for some Summer FUN!!! There are many risks to cover when it comes to summer safety, and we'll review just a few here. Please keep in mind that this is a brief list of tips. For more information check out local web sites and the ones recommended throughout this newsletter. The best way to have fun is by being safe!!!

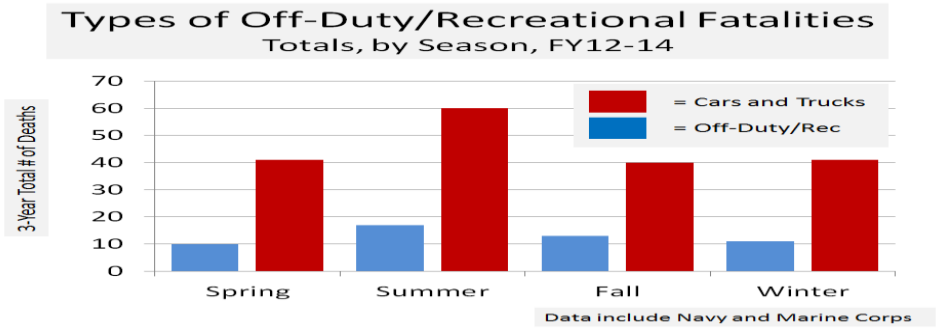
It's Summer, Now What??

As soon as summer peeks over the horizon, just like clockwork, somebody mentions, requests or demands a seasonal safety effort a la the Critical Days of Summer. Why do they do that? Well, for one thing, it is expected, and for another, we always do something. Neither of those two reasons is sufficient to make any of us expend time and energy. Nevertheless, they provoke most of us to discuss the same old hazards that pop so effortlessly to mind. We focus on specific activities that produce a tiny number of Class A mishaps.

Those fatalities are important. At the same time, they are comparatively rare, and you can't make trends out of onesies and twosies. We have to wean ourselves from closing barn doors after the cows escape and applying our flawless 20:20 hindsight.

If you are giving a summer safety brief, why talk about activities that a majority of the audience doesn't even do? It would be nice to approach the task of picking topics for a monthly campaign via an assessment of data. What activities or tasks cause the most lost-time injuries, for example? From a seasonal standpoint, does anything stand out? I recently fielded a request from a safety specialist asking for seasonal topics, because his command wanted a monthly list. I browsed around and found the following topics that I think are important (in terms of what contributes to large numbers of routine mishaps or problems). None strike me as seasonal.

- Housekeeping (lack thereof).
- Defensive driving (always necessary because other drivers are idiots).
- Safety culture (how to assess and improve it).
- Reporting near-misses (why it is important).
- Mishap precursors (bypassing safeguards, taking shortcuts, not wear personal protective equipment).
- Supervisory error (and its role in mishaps).
- Slips, trips and falls are always a huge category.
- Basketball injuries are the number one sports-related injury almost every month of the year.



Granted, summer has more than its share of certain kinds of mishaps. Here are the seasonal, 5-year averages for recreational/off-duty fatalities: Spring 23.6; Summer 31.4; Fall 20; Winter 17.2. What stands out even more is that in any season, traffic deaths far outweigh any other category. Between Memorial Day and Labor Day, 2012-2014, just 17 of 81 recreational/off-duty fatalities didn't involve cars, motorcycles or pedestrians. Eight Sailors and Marines drowned (rip current, home pool, apartment pool, lake, while cliff diving, and while riding a personal water craft). Two drowned while kayaking. One was fatally injured riding a personal watercraft. One was hit and killed by an SUV while he was riding his bike on base. Two died in ATV wrecks. Four died in falls (two from balconies, one from a second-story window at home, and one from a parking garage). One was killed in a private plane crash.

If you're going to focus on fatal mishaps, consider the human errors behind those mishaps and talk about them. Keep in mind that local mishaps and near-mishaps, of any type, may be more meaningful in terms of actionable precautions.

Fireworks Safety

Fireworks Injuries

Fireworks. They are synonymous with our celebration of Independence Day. Yet, the thrill of fireworks can also bring pain, and even death. In 2011, CPSC staff conducted a study of fireworks injuries from June 17 through July 17. Here's what we learned.

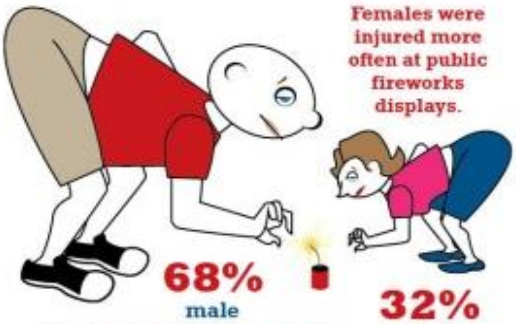
★ **200** people on average go to the emergency room every day with fireworks-related injuries in the month around the July 4th holiday.

★ **65%** of these fireworks injuries in 2011 occurred during the month surrounding July 4th.

★ **Illegal** and **homemade fireworks** were involved in all **4** fireworks-related **deaths** reported to CPSC in 2011.

Most Injured Body Parts

Injuries by Gender



Males were most injured from firecrackers, sparklers, bottle rockets, novelty devices, Roman candles and reloadable shells.

Fireworks Safety Tips

★ Never allow **children** to play with or ignite fireworks.

★ **Never** try to **re-light** or **pick up** fireworks that have not ignited fully.

★ Keep a **bucket of water** or a **garden hose** handy in case of fire or other mishap.

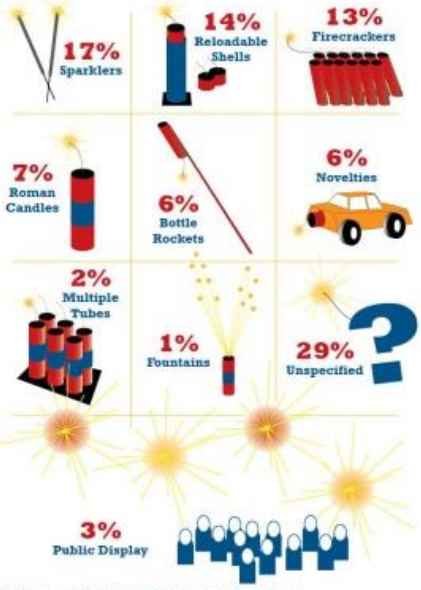
★ Make sure fireworks are **legal** in your area before buying or using them.

★ Light fireworks **one at a time**, then **move back** quickly.

★ More Fireworks Safety Tips – http://www.cpsc.gov/info/fireworks/

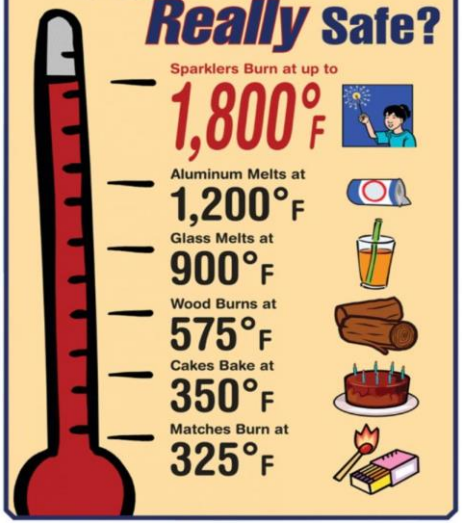
Source: U.S. Consumer Product Safety Commission 2011 Fireworks Annual Report

Injuries by Fireworks Type*

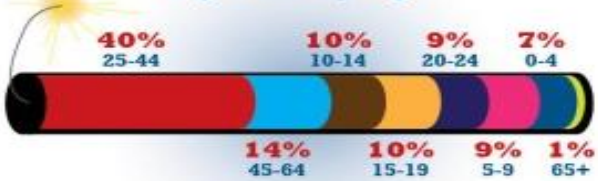


*These percents do not account for how many products are used.

Are SPARKLERS Really Safe?



Injuries by Age



FACTS

- Each July Fourth, thousands of people, often children and teens, are injured while using consumer fireworks.
- The risk of fireworks injury is highest for children ages 5–19 and adults 25–44.
- Nearly 90% of emergency room fireworks injuries involve fireworks consumers are permitted to use.

Heat Illness Prevention

Exposure to extreme heat is the reality of unit preparation for operational missions. Many heat injuries are preventable, and none need be fatal. Leaders must assess unit's missions and training requirements against the risk associated with operating in warm weather environments. Early recognition and treatment of Marines presenting with symptoms of heat injuries are key to saving lives.

3 REASONS WHY YOU NEED TO KNOW ABOUT HEAT ILLNESS

1. Heat illness is a threat to individual health and to military operational success:

- Despite well documented and effective techniques for preventing heat illnesses, they continue to be a threat to Marines in training and combat.
- Even mild heat illness and dehydration can *significantly* degrade performance:
  - ✓ Degrades performance
  - ✓ Losing 4% of body weight from dehydration degrades physical performance 50%
  - ✓ This 4% body weight loss is possible in less than 2 hrs!
  - ✓ Increases core body temp
  - ✓ Every 1% loss of body weight increases core temp .10-.23°C or .18-.40°F (increasing risk of more serious heat illness)

2. Heat illness is preventable! The best solution to heat illness and dehydration related problems is prevention!

3. Training is required! II MEFO 6200.1 Exertional Heat Injury Prevention & Management and MARADMIN 111-15 (Marine Corps Heat and Cold Stress Injury Prevention Program.

TYPES OF HEAT ILLNESSES

Exertional Heat Illness ("EHI") refers to a spectrum of disorders (e.g., cramps, heat exhaustion, heat injury, heat stroke) resulting from total body heat stress. While there is a range of adverse effects that can result from the body over-heating, the 2 major kinds of heat illnesses that are referred to as heat casualties are: forms of ***heat exhaustion*** (can be milder or more severe), while more severe cases are ***heat stroke*** (most severe form of heat illness and possibly fatal).

HEAT EXHAUSTION

"Canaries in the coal mine" - need to catch these before they get to a more extreme case of heat stroke - catch early as they need rest/water/evaluation and possible medical care.

Symptoms:

- ✓ Dizziness
- ✓ Headache
- ✓ Nausea
- ✓ Weakness
- ✓ Clumsy/unsteady walk
- ✓ Muscle cramps

Treatment:

- ✓ Rest Marine in shade
- ✓ Loosen uniform/remove head gear
- ✓ Have Marine drink 2 quarts of water over 1 hour
- ✓ Evacuate if no improvement in 30 minutes, or if Marine's condition worsens

HEAT STROKE

Medical emergency – these cases already have abnormal brain function and can be fatal – initiate rapid cooling and EVAC!

Symptoms:

- ✓ Profuse sweating
- ✓ Convulsions and chills
- ✓ Vomiting
- ✓ Confusion, mumbling - do mental check questions to see if brain is working correctly
- ✓ Combative
- ✓ Passing out (unconscious)

Treatment:

- ✓ **COOL and CALL!! – the faster the body is cooled, the less damage to the brain and organs**
- ✓ Strip (if possible, ensure a same gender helper is present)
- ✓ Rapid cool (ice sheets)
- ✓ ***Cover all but face with iced sheets.***
- ✓ ***Ensure the iced sheet is soaked prior to applying to the casualty.***
- ✓ ***Fan the entire body.***
- ✓ ***Stop cooling if victim starts shivering.***
- ✓ **Call for evacuation**
- ✓ **Continue cooling during transport**

HYPONATREMIA "Water Intoxication"

This is a Medical Emergency – EVAC immediately, can be mistaken for Heat Stroke, though treatment is very different.

Symptoms:

- ✓ Mental status changes
- ✓ Vomiting
- ✓ History of consumption of large volume of water
- ✓ Poor food intake
- ✓ Abdomen distended/bloated
- ✓ Large amounts of clear urine (if urine)

Treatment:

- ✓ Do not give more water or IV! If awake, allow the Marine to consume salty foods or snacks
- ✓ Evacuate immediately

continued on page 4

In recent years, excessive heat has caused more deaths than all other weather events, including floods. A heat wave is a prolonged period of excessive heat, generally 10 degrees or more above average, often combined with excessive humidity. You will likely hear weather forecasters use these terms when a heat wave is predicted in your community:

- **Excessive Heat Watch -** Conditions are favorable for an excessive heat event to meet or exceed local Excessive Heat Warning criteria in the next 24 to 72 hours.
- **Excessive Heat Warning -** Heat Index values are forecasting to meet or exceed locally defined warning criteria for at least 2 days (daytime highs=105-110° Fahrenheit).
- **Heat Advisory -** Heat Index values are forecasting to meet locally defined advisory criteria for 1 to 2 days (daytime highs=100-105° Fahrenheit).

Preparing for a Heat Wave

- Listen to local weather forecasts and stay aware of upcoming temperature changes.
- Be aware of both the temperature and the heat index. The heat index is the temperature the body feels when the effects of heat and humidity are combined. Exposure to direct sunlight can increase the heat index by as much as 15° F.
- Discuss heat safety precautions with members of your household. Have a plan for wherever you spend time— home, work and school—and prepare for the possibility of power outages.
- Check the contents of your emergency disaster kit (bug out bag) in case a power outage occurs.
- Know those in your neighborhood who are elderly, young, sick or overweight. They are more likely to become victims of excessive heat and may need help.
- If you do not have air conditioning, choose places you could go to for relief from the heat during the warmest part of the day (schools, libraries, theaters, malls).
- Be aware that people living in urban areas may be at greater risk from the effects of a prolonged heat wave than are people living in rural areas.
- Get trained in First Aid to learn how to treat heat-related emergencies.
- Ensure that your animals' needs for water and shade are met.

Continued from page 3

REACTING TO A HEAT ILLNESS CASUALTY:

Remember "M.A.D.E. in the Shade":

MOVE victim to cool location
(e.g., shade, A/C car, building)

ASSESS victim to determine type of EHI

- *Signs/symptoms*
  - Hydration (550 cord) to check for hyponatremia
  - Risk level (red beads or risk factors)
  - Mental status (for heat stroke)
- *Designate single person to continue monitoring. It is critical that a specific person is assigned to STAY with victim and continuously monitor all changes including mental status – Even the slightest changes that can occur in minutes may not be noticed if different personnel are checking victim – these slight changes can be critical in ensuring the best outcome for the victim.*

DECIDE which EHI and take proper management approach

- *Heat Exhaustion: rest in shade, rehydrate*
- *Heat Stroke: begin rapid cooling, evacuate immediately*
- *Hyponatremia: evacuate immediately*

EVALUATE other Marines and adjust training as necessary

WET BULB GLOBE TEMPERATURE

Wet Bulb Globe Temperature (WBGT) is a composite temperature used to estimate the effect of *temperature, humidity, wind speed* ('wind chill'), and visible and infrared radiation (e.g., sunlight) on humans. The WBGT index was developed in 1956 by the United States Marine Corps at Parris Island to reduce heat stress injuries in recruits. It is determined with special equipment and calculated to reflect components of air, humidity and wind that affect 'actual temperature' experienced by personnel: WBGT is derived from the formula: 0.7Tw + 0.2Tg + 0.1Td

- T_w = Natural wet-bulb temperature (with dry-bulb temperature indicates humidity)
- T_g = Globe thermometer temperature (also known as black globe thermometer)
- T_d = Dry-bulb temperature (actual air temperature)

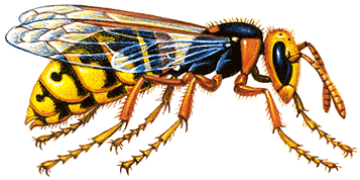
HEAT CONDITION CATEGORY CHART

RISK	TEMP	RISK MITIGATION	HEAT INJURY SIGNS AND SYMPTOMS
White Flag MINIMAL	< 82 WBGT	Time to exercise! Drink water/sports before/after exercise	Recognize early symptoms and take appropriate action to prevent serious heat disorders in yourself and others.
Green Flag LOW	82-84.9 WBGT	Drink at least 1 qrt of water/ sports drink every 20 min	Recognize early symptoms and take appropriate action to prevent serious heat disorders in yourself and others.
Yellow Flag MEDIUM	85-87.9 WBGT	Take rest breaks during exercise and keep drinking fluids	**HEAT CRAMPS LIKELY:** Painful contraction of muscles, weakness
Red Flag HIGH	88-89.9 WBGT	Consider reducing workout intensity	**HEAT EXHAUSTION LIKELY:** Dizziness, nausea, vomiting, headache, fainting, disorientation, weakness
Black Flag EXTREMELY HIGH	≥ 90 WBGT	**Extreme Caution!** Exercise indoors in a cooler setting	**HEAT STROKE HIGHLY LIKELY:** Extremely high body temp, confusion, convulsions, unconsciousness, death

Be Aware of Summertime Biting Bugs & Insects

North Carolina has a warm, humid climate with mild, short winters, making it a perfect place for many biting and stinging insects. Wasps, ants, mosquitoes and flies are among the more prevalent pests found in this East Coast state. While some, like the black fly, are native, others, like the imported red ant, are immigrants from other parts of the world.

Wasps and Fire Ants



Paper wasps, found in North Carolina and throughout temperate climates in North America, are reddish-brown to black, have long legs and thin, spindle-shaped abdomens. Female paper wasps create a gray, paper-like nest to house their eggs in the spring. They feed their larvae caterpillars and because of this are generally considered beneficial. The greatest likelihood of a sting occurs as more wasps are born and fill the nest.

The imported red fire ant (Solenopsis invicta) is a native of Brazil. It is reddish to dark brown and ranges in size from one-eighth to one-third of an inch. It builds dirt mounds that can be dome shaped or more irregular. Currently, the imported red fire ant is considered a dangerous pest, infesting 71 of 100 counties throughout the central and eastern parts of the state. Fire ants defend their mounds by swarming and stinging intruders. Stepping on a mound can be **FATAL** for children or those with allergies to the ants' venom. Mounds can be destroyed using insecticidal baits or sprays.

Mosquitos

Mosquitoes thrive in moist, humid environments and the warm, temperate environment in North Carolina is a perfect place for these biting pests. Mosquitoes are known to carry many **DEADLY** diseases, including west Nile virus, yellow fever and malaria. The Department of Entomology at North Carolina State University insists that mosquito control is a community effort and calls on residents to eliminate standing water from their properties, fill tree holes, keep swimming pools and bird baths clean and report debris or drainage problems in ditches and culverts.

Biting Flies

Biting flies, like black flies and midges, are swarming insects that find eyes, ears and noses particularly interesting. Swarming people and other mammals, black flies lacerate the skin and suck the blood of their victims. They have been known to carry parasites, although this is not common in the United States. Nearly all streams in North Carolina hatch black files, which can become a nuisance when they swarm in the thousands. Staying indoors, using insect repellent and sheltering animals are effective ways to ward off troublesome swarms.

Spiders

- Most spiders are harmless; the two exceptions in the U.S. are the black widow and brown recluse spiders.
- Spider bites are actually rare occurrences, and most presumed cases of spider bites are likely due to another condition that mimics the symptoms of a spider bite.
- Bites from most (non-poisonous) spiders cause local redness, irritation, and pain that usually can be treated at home.
- Always seek emergency medical care for a presumed black widow or brown recluse spider bite.

What are the symptoms of spider bites? Bites from most (non-poisonous) spiders cause local redness, irritation, and pain that usually can be treated at home using an over-the-counter pain reliever along with application of cooling packs or a wet cloth to relieve swelling. These local reactions usually resolve without treatment over a period of 7-10 days. Rarely, an individual can have an allergic reaction to a spider bite, even to a bite from a non-poisonous spider, but allergic reactions are more likely to be due to contact with a spider than from a spider bite.

Black widow spider bite symptoms: A black widow spider bite is said to feel like a pinprick, although victims may not realize that they have been bitten. Sometimes double fang marks may be seen at the location of the bite. The most common localized symptoms of a black widow spider bite are immediate pain, burning, swelling, and redness.

Brown recluse spider bite symptoms: The bite of a brown recluse spider leads to a mild stinging, followed by local redness and severe pain that usually develops within eight hours but may occur later. Some reports of brown recluse bites describe a blue or purple area around the bite, surrounded by a whitish ring and large red outer ring in a "bull's eye" pattern. A fluid-filled blister forms at the site and then sloughs off to reveal a deep ulcer that may turn black.

Around the Corps….

I remember, back when money was scarce, that I had two goals for the tires on my car. First, they should pass inspection. Second, they shouldn't go flat more than once every few months, preferably when it was daylight and not raining.

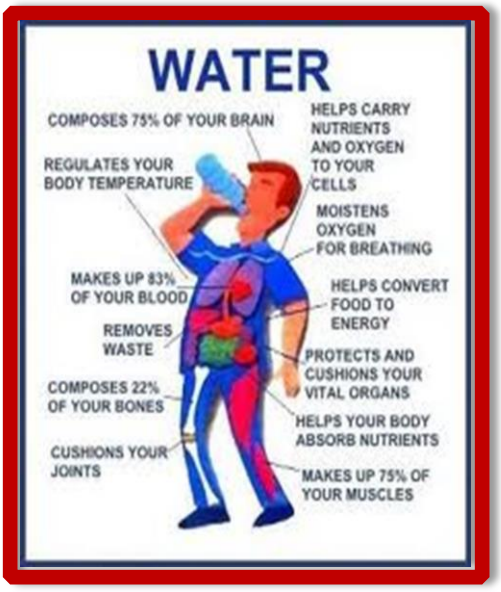
I now have a better appreciation for how important they are. I can afford to buy high-quality tires, and I even check the air pressure frequently. What could be safer than new tires?

For motorcycle riders, new tires that have been broken in. An E-5 learned this lesson after driving away from his motorcycle dealership. He'd just had his motorcycle's rear tire replaced. He turned right and felt the wheel slide. He then laid down the machine, cutting his leg and rasping a few layers off his knee.

The report explained that new tires have a "protective coating for the manufacturing process" that interferes with traction for a while.

Funny, you'd think they'd mention that to customers so that they didn't have to learn it the hard way, with the accent on "hard." The E-5 had taken the basic rider course three years earlier and the military sport bike rider course about a year and a half earlier. However, the report listed his "experience" as "four months."

Navy Safety Center Summary of Mishaps 6-12-15



What's new on SharePoint

* **Spring & Summer Resource Training Material**
* **Safety Training Opportunities**
* **Upcoming Training**

II MEF Safety SharePoint Address: https://intranet1.iimef.usmc.mil/Safety/default.aspx

Safety Training

The below safety courses are available for all II MEF personnel. Detailed information for each course is located at https://intranet1.iimef.usmc.mil/ Safety/default.aspx under the Safety, Motorcycle, and Radiation Training Announcements. Contact your Safety Manager for all your safety related concerns & registration. To enroll in Alive at 25 (DIC), sign up through ESAMS www.navymotorcyclerider.com. The location is Lejeune Learning Center, Bldg 825, Stone Street (Education Center) Room 220. Uniform of the day. Walk-ins are accepted; registration is preferred.

DATE(S)	COURSE TITLE	LOCATION
13-24 Jul 2015	Ground Safety for Marines (GSM) (0730-1630)	CamLej (Bldg 1003)
12 Aug 2015	Respiratory Protection, Lock Out/Tag Out, Hearing Conservation, Sight Conservation, Blood Borne Pathogens, Non-Supervisor Safety (0800-1600)	CamLej (Bldg 524)
13 Aug 2015	Supervisor Safety, Permit Required Confined Space Refresher (PRCS), Radiation Safety, Ergonomics, Hazard Communication, Lead Safety (0800-1600) 2 hours each	CamLej (Bldg 524)
27-28 Aug 2015	OSHA 10 Hour Course General Industry	CamLej (Bldg 1003)
14-18 Sep 2015	Mishap Investigation Course (0730-1630)	CamLej (Bldg 524)
14-25 Sep 2015	Ground Safety for Marines (GSM) (0730-1630)	CamLej (Bldg 1003)
18-25 Sep 2015	Mishap Investigation Course (0730-1630)	CamLej (Bldg 524)
24-25 Sep 2015	OSHA 10 Hour Course (Construction) (0800-1600) & (0800-1200)	CamLej (Bldg 1003)
18 Nov 2015	Respiratory Protection, Lock Out/Tag Out, Hearing Conservation, Sight Conservation, Blood Borne Pathogens, Non-Supervisor Safety (0800-1600)	CamLej (Bldg 524)
19 Nov 2015	Supervisor Safety, Permit Required Confined Space Refresher (PRCS), Radiation Safety, Ergonomics, Hazard Communication, Lead Safety (0800-1600) 2 hours each	CamLej (Bldg 524)
19-20 Nov 2015	OSHA 10 Hour Course General Industry	CamLej (Bldg 1003)
7-18 Dec 2015	Ground Safety for Marines (GSM) (0730-1630)	CamLej (Bldg 1003)